

Received : 03 February 2024, Accepted: 07 March 2024

DOI: <https://doi.org/10.33282/rr.vx9i2.49>

## **Impact of Online Learning vs Traditional Mode of Learning on University Student's Educational Performance in Pakistan**

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### **Abstract**

Because of the widespread adoption of internet technology, online learning has emerged as a cutting-edge approach that extensively utilized by academic institutions worldwide. The primary goal of the current research survey was to investigate how students' academic performance, particularly their CGPA, was affected by online learning. A purposive sample technique was used in the research design, which involved recruiting 100 undergraduate and 100 postgraduate students from the social science and pure science departments of 5 public universities in Islamabad. The participants in the survey ranged in age from 18 up to 34. For data collection, the researcher employed closed-ended questionnaire. The empirical results showed that the number of students using online learning is statistically considerably larger than the number of students using traditional learning methods. Furthermore, the findings indicated that the average level of student happiness with traditional in-person lectures was 5.21, whereas the average level of student satisfaction with online learning was 8.91. The study's main conclusions highlight a notable difference in learning outcomes as well as favorable views between online and traditional learners, suggesting that the online learning is a good option for higher education in academia. This research study will also add to the body of knowledge already available on online versus traditional learning modes.

**Keywords:** Online learning, Traditional Learning, Academic Performance, Attitudes towards Educational performance, University Student, Educational Performance

### **1.1 Introduction**

Thus, discussing the internet and education in numerous ways. Despite such exaggeration, there are at least four different approaches to comprehend how the internet affects education

and learning. Secondly, the internet has the ability to provide individual learners more independence from the constraints of the physical world. In order for people to access high-quality learning opportunities and educational offerings, it is sometimes stated that geographic, spatial, temporal and physical barriers should be reduced. Therefore, it is implied that education can occur anywhere at any time and at any speed thanks to the internet. Several critics interpret these liberties as extending beyond socioeconomic and social disadvantage. Supporting more equitable and unrestricted educational connections and experiences internet is growing more powerful (Laurillard, 1995). In traditional methods of learning and teaching, the students obtain inspiration and motivation from the teacher face-to-face interaction. This method is also favorable between students and teachers due to its feasibility. Majority of the time during study sessions the instructor have great opportunity to know and encourage each student individually. Conventional teaching approaches are considered as teacher-centered classrooms that cannot accommodate both teacher and students (Bento, & Bento, 2000). Good learning is collaborative and social not competitive and isolated according to this modern adage. Working together improves the learning process by increasing involvement. Thinking and comprehension also improved by sharing one's own thoughts and then responding to others' responses.

### **Research Question**

1. What extent university students use internet facilities for their academic purposes?
2. How university students satisfied from online learning to achieve higher CGPAs?

### **Hypothesis**

- It is more likely assumed that university students prefer mobile phone more than laptop for their academic learning

### **Literature Review**

A literature review is systematic search and analysis of information. It is considered as the critical component of any research work. The internet study is an innovative area of social sciences. Several researcher of social sciences studied the prestigious factors in internet that build the user perception and its effects as a full. According to Wimmer & Dominick (2003), literature review allows researcher about information from previous research but it also saves time, effort and money of researcher who conducts research work. Similarly, Kincannon, (2002) convey about research literature that the goal of the review is to learn about research that have been conducted in previous studies. Research study's launching pad is literature review. A critical phase in every research process is the literature review. Researchers typically look at a number of benefits of literature reviews around the globe (Citera, 1988). Finding out how the internet affects University students' academic learning was a key goal of the current study. The results of pertinent studies are reviewed in this chapter together with the literature. Due to the prevalence of new technology and educational methods active academic learning involves instructional activities involving students in doing things and thinking about what they are doing. Researcher in his research study has indicated that use of internet, as an educational tool can seem as increase student engagement. With the help of encourage engagement with internet, students develop relations with peers, fellows, and classmates. They establish a virtual community of learners and ultimately with this practice they increase their overall academic learning and grading (McConnell, 2000).

Students with high academic achievements (CGPA) use internet more frequently for their academic studies. They gain more knowledge and information with this practice across

the world. Researcher further suggests that students should encourage using internet (Norris, 2001). Students should use reliable resources in their project and research for successful research work. Students from higher classes should use E-journals, E-libraries, E-books, and Online databases as academic resources for their related courses (Holliday, & Li, 2004). According to researcher regarding to internet usage, Malaysia has highest internet users. Internet allows access in field of education as broad range of educational resources. Students should know about use of technology. They should seek for accurate and specific information for their academic studies. McLaren, (2004) elaborates in his research work that majority of university students use internet to dugout information. Researcher further added that in developing countries like Asia, Africa and Latin America, internet is the main source of information, which is normally used to improve and develop the nations. In the field of educational technology, researcher has proved many benefits of using the internet. These benefits are provision of stronger motivation for academic learning among students in their campuses. The success of a technology and internet-enriched teaching and academic learning environment in shaping positive attitudes among students towards using the internet for academic learning was examined by Jamal and Shanaah (2011). According to the findings, both students and the facility had favorable opinions of using the internet as a tool for academic study. Students enjoy the most esoteric online information. Students believed that the internet supported their academic learning. The internet is becoming a more popular teaching tool as multimedia and information technologies advance. The old methods of teaching and learning have undergone significant modifications because of the internet. There are now more options for higher education because to internet use (Tella, 2007).

### **Theoretical Framework**

Theoretical framework is supposed as a roadmap for every research work. When a person plans a journey in unknown location, people initially seek knowledge and information as soon as possible about the best way to travel. At the beginning of research study, it is considered very important to choose relevant theory. Every researcher explores the facts of the phenomenon, which is being researched (Noss, & Pachler, 1999). With the help of simple questions, the researcher starts its work to build up structured theoretical framework. Now mass media is depending on the establishment of the economic and political system of every country. The purpose of mass media is trying to organize the stage of development of every society along with the protection of common interest and requirements of specific persons (Walgrave, & Manssens, 2000).

#### **3.1 Diffusion of Innovation**

The process by which an innovation is communicated through certain channels over time among the members of social system. An idea, practice, or object perceived as new by an individual or other unit of Adoption.

#### **3.2 Place**

Conceptually it refers to the sitting place where a respondents use internet for his/her academic performance like home, internet café, friend's home and central library etc.

#### **3.3 Devices**

Conceptually it refers to the multimedia-capable device, which is used to access internet like Mobile, Computer, Laptop and Tablets etc.

### **3.4 Online Learning**

Conceptually, online learning is a process, which refers towards a deliberate structured transition strategy of knowledge. Online learning also promotes interactive collaborative styles and problem solving.

### **3.5 Purpose of use of internet**

Conceptually, it refers to the accessible literature and material on all sources of internet, which provides useful suggestions of its application in higher institutions of education like colleges and universities.

### **3.6 Browsers**

Conceptually it refers to internet browsers, which *are* primarily intended to use the World Wide Web (WWW). The most popular web browsers are Google Chrome, Opera and Firefox, which are used to fetch data from internet.

### **3.7 Internet for Future Studies**

Conceptually it refers to use of internet for the purpose of future studies by the respondents.

### **3.8 Attention**

It refers to users' attention with the coverage to internet contents and data types like MS Word, PPT, PDF, Excel, JPG, Video files, and text files. According to this concept, researcher seeks information about how much users are paying attention to the educational contents of internet.

### **3.9 Data Retention**

It refers to the frequency of retention of data from internet sites like Google, Wikis, E-books, E-research sites, and Google Scholars etc.

### **3.10 Traditional Methods of Learning**

It refers to the frequency of use of traditional methods of learning for the academic purpose. Conceptually, it refers to classrooms, where teaching focuses on a number element including lecture, case studies, team projects, and so for.

### **3.11 Understanding**

Conceptually, it refers to the understanding level of respondents regarding use of internet educational contents for academic needs, etc.

### **3.12 Information Seeking**

Conceptually, it refers to the degree of information received by the targeted population from internet.

### **3.13 Satisfaction**

It refers to users' satisfaction with the coverage to educational contents using internet. According to this, concept respondents seek information about how much users are satisfied with the educational contents coverage presented by internet sites.

## **Methodology**

### **4.1 Research Method**

Research method is the standardized dealing process in research work. Research method concerns on scientific measures, descriptions of data and justifications of exercise. Research method is a process, which is used to collect data, analyses data, store and present data. Research method is part of a research process, which is given in theoretical discipline (Yom, 2015).

### **4.2 Research Design**

A research design is an association between research methodology and the nature of the study (Apuke, 2017). The selection of an applicable research design is necessary for researcher; this will ensure your study that it is proficient of answering your research question. In a research design, an appropriate data collection method is used along with the logic of how the data will be gathered (Queirós, 2015).

### **4.3 Survey Research**

According to Wimmer Roger & Dominick Joseph (2003), surveys methodology is used in all spheres of human life. This study has planned to explore the effectiveness of use of internet for the academic studies of students of five mainstream public universities of Islamabad. These universities are Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad.

### **4.4 Population**

Population is defined as large general group of peoples in many cases. A researcher draws a sample from whole population and it has usually stated in theoretical expressions. In this study, the Universe of study is male and female students of five mainstream public universities of Islamabad. These universities are Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad.

### **4.5 Sample**

According to Achary, Et al., (2013) a sample is a subset of entire population. A sample is a group of respondent, which are taken from a population to represent the entire population. It is necessary for researcher to draw a representative sample from whole population. Sample should representative of its entire population. In this research study, the sample size is 200 male and female students of five mainstream public universities of Islamabad. These universities are Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad.

### **4.6 Probability**

Probability sample is selected according to mathematical guidelines (Wimmer & Dominick, 2003). Probability sampling method is consisting of appropriate chance for selection of each unit from population. In this research work for the purpose of data collection, the target of two hundred respondents has systematically selected from five mainstream public universities of Islamabad. These universities are Quaid Azam University Islamabad, Bahria University

Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad.

#### 4.7 Non-Probability

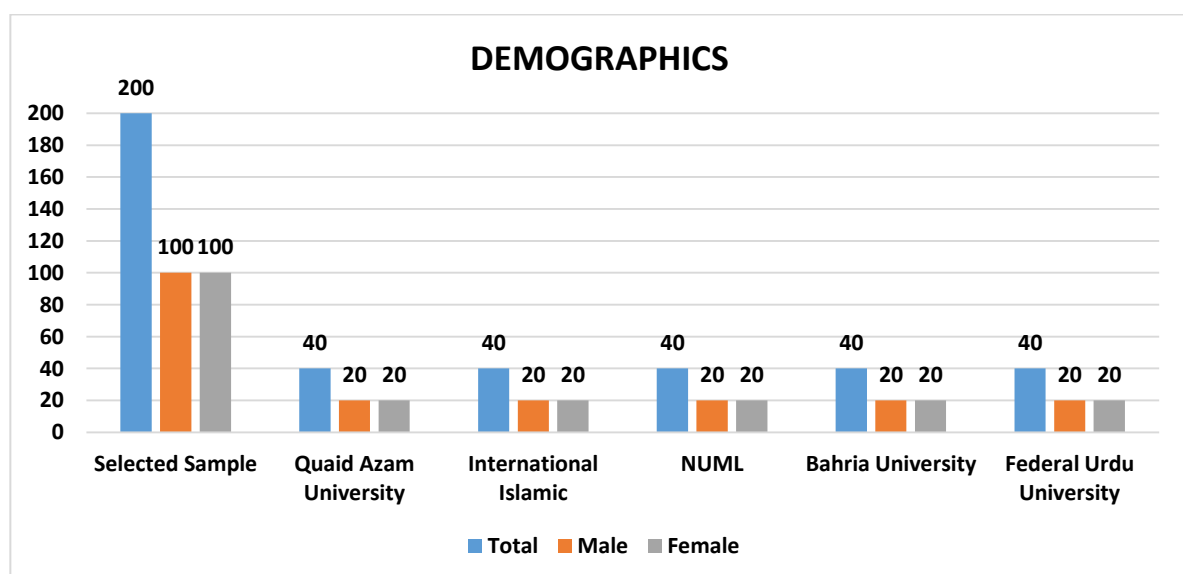
Non-probability sample is a set of persons or peoples that are selected from entire population. Non-probability sampling is not bound for the mathematical guidelines. Convenience sample also known as an available sample is a collection of readily accessible subjects for study (Watters, & Biernacki, 1989).

#### 4.8 Present study

In this research study, the researcher adopts the mixed method of probability and non-probability sampling method collectively because of the study needs and nature. In this research work researcher, get data through online source well-constructed close-ended questionnaire. For this purpose triangulation of probability and non-probability, sampling method was very appropriate. Due to researcher need and requirement, triangulation method was very feasible for this research study.

#### 4.9 Sampling Methods

In this research study, convenience-sampling method has adopted scientifically. For this, purpose a procedure generated by researcher to divide population into subgroups to meet the requirement of this study. The entire population has divided into five public sector universities where broadly two groups i.e. natural science and social science departments are equally divided. In every group, 100 male and 100 female students has selected for data collection. These students are equally divided into male and female groups like 50 male and 50 female students from each group like social science group and pure science group. The data collection method was adopted through online Google forms. This approach sufficiently organized the selected population into heterogeneous subsets. After demographic division of respondents, convenience-sampling procedure is used for further categorization.



Above-mentioned chart (4.1) reveals the result of demographic analysis of selected population. Here we can see that a number of 200 students are randomly selected from to five universities of Islamabad. Male and female ratio is equal in both segments. 100 male and 100 females are systematically selected from all universities. In every university, overall 40 students are selected randomly where 20 male and 20 female students are equally divided for

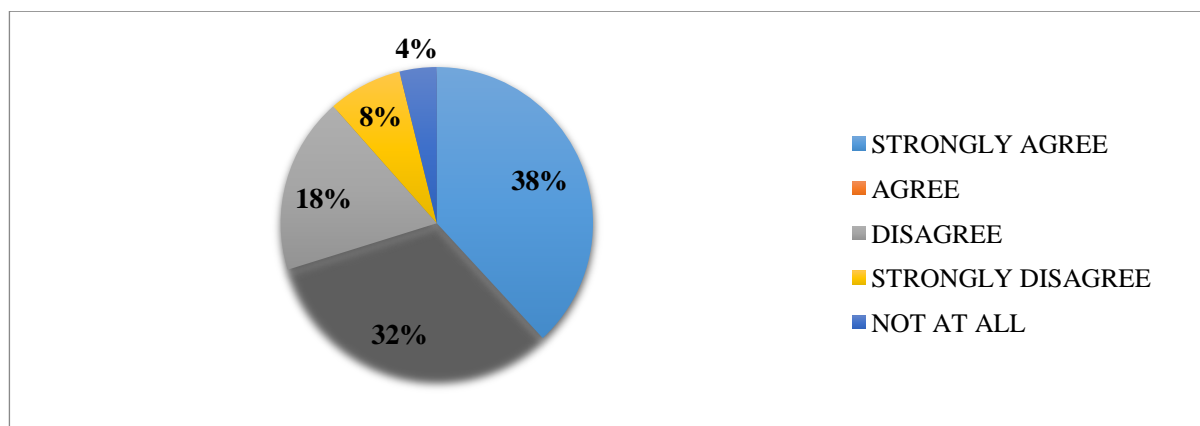
data collection. These universities are Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad. Online Google form source used for data collection. Questionnaire used in this survey was close ended.

**(Table 4.1) Frequency of Use of Devices**

Respond Category	Mobile/Android Phone	Personal Computer	Laptop	Tablet
Very much	37.5	19.2	28.5	15.4
Much	33.7	28.5	19.9	17
Somewhat	12.5	11.2	17.9	8.3
Rarely	7.7	26.3	10.6	7.4
Not at all	8.6	14.8	23.1	51.9
<b>Total Frequency</b>	100 %	100 %	100 %	100 %
<b>*Values shows percentage (%)</b>				<b>n=200</b>

Table (4.1) results explain the liking of set of selected devices like Mobile/Cell phones, Personal Computers PC, Laptops, and Tablet. In step with findings concerning using gadgets of internet, the imperial evidences reveal that majority of overall students (37.5 %) responded as very much and (33.7 %) as much for Mobile/Android Phone. Similarly, (12.5 %) responded as somewhat, whereas (7.7 %) respondents answered as rarely and (8.6 %) responded as not at all for Mobile/Android Phone. Analytical view from observed data reveals that, overall perception about Personal Computer is (19.2 %) as very much and (28.5 %) as much similarly, (11.2 %) showed their expressions as somewhat and (26.3 %) rarely followed by (14.8 %) as not at all. Laptops users are (28.5 %) as very much and (19.9 %) as much followed by (17.9 %) as somewhat and (10.6 %) for rarely response category. Accordingly, findings regarding liking of Tablets (15.4 %) answered very much followed by (17 %) much. Further it was observed that Tablets are more frequently (51.9 %) rejected from respondents as compare to Laptops (23.1 %) although mobile phones are more liked by the students for use of internet (37.5 %) as compare to Laptops ( 28.5 %). Research study results also accepted the hypothesis statement that the respondents most significantly use Mobile Phones as compare to Laptops by the students of Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad.

**(Figure 4.2) Internet Helps in Understanding Education**

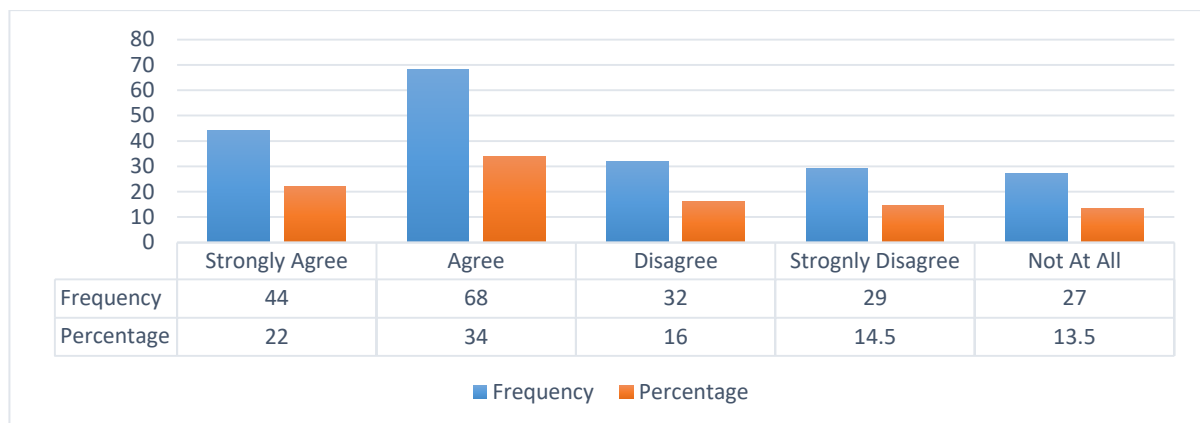


\*Values shows percentage (%)

n=200

Through internet, student can get data and understand his syllabus and patterns of his education very easily. Students can access data very easily and is able to understand and fulfill his academic needs. Above mentioned (Figure, 4.2) explores the understanding level of students' education through internet. The exclusive analysis of above mention graph reveals that majority of respondents from Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad answered that they are strongly agree (38 %) in favor of notion of online learning followed by agree (32 %) response category. Empirical results further reveal that respondents (18%) disagree as compare to (8%) strongly disagree followed by rest of respondents who answered as not at all (4 %).

(Figure 5.3) Academic Satisfied From Internet

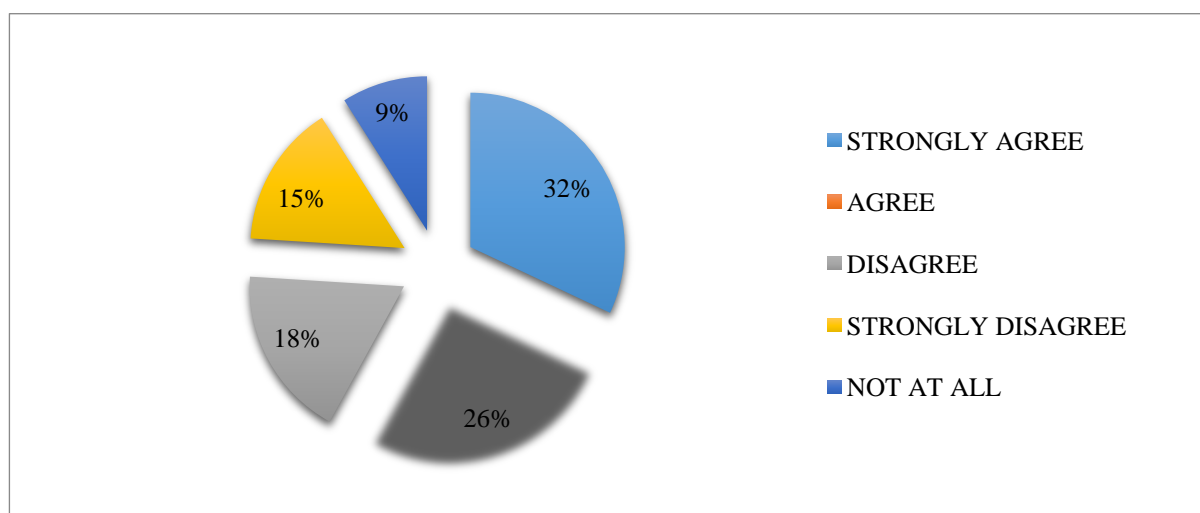


\*Values shows percentage (%)

n=200

Above-mentioned (Figure 4.3) elaborates the results of students' satisfaction towards internet learning. (22 %) students answered that they are strongly agree, (34 %) students answered that they are agree with this notion rather than only (16%) disagreed to this question. Rest of (14.5 %) answered as strongly disagree followed by (13.5 %) who answered their feelings as not at all for internet learning. These result shows the notion that they are strongly satisfies by online learning.

(Figure 4.4) Internet Increases Information Level of University Students



\*Values shows percentage (%)

n=200



Above (Figure 4.4) shows the perception of students of Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad about the notion that through internet a student increases his/her information level. The overall empirical results shows that (32 %) user of internet strongly agree while (26 %) of total sample size is agree to this notion. Although, (18 %) disagree to this notion. Overall, (15 %) strongly disagree as compare to (9 %) of whole sample who answered as not followed by (9%) who answered as not at all.

#### 4.1 Statistical Analysis and Descriptive Statistics of the Study

Statistical analysis relates to “set of principles, rules and techniques”. Researchers collect the data, feed the data into SPSS software, summarize the data, and interpret the data (West, et al., 2007). Statistical analysis leads to a set of diverse methods, which are used in the process of statistics to develop very large amounts of data through SPSS software and other computer related software. This statistical process generates an overall report is called statistical tool. In this research, study the collected data is analyzed through SPSS 19 software and consequences are drawn in forms of tables and figures. In social sciences, descriptive statistics are used in social science research work. A researcher can summarize the distribution of attributes on single variable with descriptive statistics. With the help of descriptive statistics, researcher can sum up the relationships between two or more than two variables. In descriptive, statistics the summarizing of the relationships between one and other variables are called measures of associations.

#### 4.2 Correlation and Chi-Square

Correlation is an expression, which is used in statistical analysis process. Correlation refers to the “strength an intensity of a relationship between two or more variables”. Correlation is measured in a “strong, or high,” and or weak and strong correlation between the variables. In every research process, we can say that in a data analysis process two or more variables are having a strong relationship with each other. In correlation weak or low correlation means that the “variables are hardly related to each other”.

**Table 4.6 One Sample T-Test**

One-Sample Test						
	Test Value = 0					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
<b>Gender</b>	53.363	319	.000	1.49375	1.4387	1.5488
<b>Use of internet</b>	33.608	319	.000	2.24375	2.1124	2.3751

#### Hypothesis of Research study

- It is more likely that Students prefer Mobile Phones/Android more than Laptops for their academic learning (Accepted through Chi-Square Test)

**Table 5.7 Chi-Square Results**

Chi-Square		
Chi-Square	Laptop	Mobile
	49.619 <sup>a</sup>	91.279 <sup>a</sup>
df	4	4
Asymp. Sig.	.000	.000

### Summary and Suggestions

The traditional methods of learning are key advantage and success in third world countries. In our country, traditional method of learning is very important and famous in traditional institutions. Through traditional methods of learning, different methods are adopted like classroom study, books, seminars, group studies and printed material like notes etc. Internet browsers are software program utility. These are used to open and access to internet web page. Important browsers are Mozilla Firefox, Opera, and Google Chrome. Student uses these browsers for retrieving information, watching videos, and getting access to all sort of websites the usage of net. In Android telephones, most of these browsers also are available and installable through Google play store. Student fulfills their needs with the help of internet during their academic sessions. Internet is very cheap and less energy consumed source of data retrieving. Majority of students prefers that they prefer internet in future studies. Student responded their likeness when they asked to give answer of the question that they would use internet for their future academic needs. Nowadays, there are the great moves in the structure of the education. Researchers are establishing the use of new technologies for victorious life. We are living in a knowledge-based society. This process is increasing modern innovative ways of education. Most of students desire to use these new technologies in order to expand their knowledge and oblige new skills. These lead to change in the way of learning.

It is found that the advancement of computer and network technologies contributed to make the way to inform people very difference from how it was previously done. The internet is an educational tool with frequent potentials. The Islamabad based university students' essential skills in the internet and their perceptions of internet learning environment were related to their use of the internet to supplement their learning requirements. University students with better basic skills in the internet had better attitudes toward using the internet to improve their studies and CGPA. Thus, different types of laptop like PM Laptop Scheme and CM Punjab Shahbaz Shareef Laptop Scheme are also promoted and this practice encouraged the lecturers and students to make use of the technology in the campuses. The internet is used to polish internet-learning activities. This practice is very much successful in academia. The Online learning actively encouraged the students' use of internet for learning and teaching. The syllabus of basic courses of semester was achieved throughout the help of technology and internet. It is further added that the students' studying habit of using internet and modern technology would increase information and knowledge level of university students. This research study also discovered that commonly students at of Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad had very positive attitudes towards online learning. Students are very well aware about internet learning and this awareness was not race class and or gender bound. It quality was not associated to students' educational ability. However, students from the graduate programme had more positive and well-mannered attitudes as compared to students from the under graduate programme. This could be because the students from graduate programme were more expose and had more opportunities to use the internet for course related activities. The

students of of Quaid Azam University Islamabad, Bahria University Islamabad, Federal Urdu University Islamabad, National University of Modern Languages and International Islamic University Islamabad had normally well awarded in the basic skills of using the internet and perceived internet learning environment. University internet facility also encouraged students to use the internet as supplementary learning tool.

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